REMARKS

This Amendment and Response is filed in reply to the final Office action dated September 24, 2007. Claims 1, 3-4, 6, 8-10 and 16-17 are amended, claim 5 is cancelled and claims 7 and 11-15 were previously cancelled. Accordingly, after entry of this Amendment and Response, claims 1-4, 6, 8-10 and 16-20 remain pending.

I. Claim Objections

Claims 8-10 are objected to for depending from cancelled claims. In response, claims 8-10 are amended to depend from independent claim 6.

II. Claim Rejections Under 35 U.S.C. § 112

Claims 1-6, 8-10 and 16-10 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Office action alleges that it is unclear in claims 1, 6 and 16 where in the claims it is determined what the output of the combinatorial gate feeds into. In response, independent claims 1, 6 and 16 are clarified to each include a limitation that determines what the output of the combinatorial gate feeds into. However, such amendment is not believed to narrow the scope of the claim as this was inherently performed. It is respectfully submitted that the claims, as amended, are in compliance with 35 U.S.C. § 112, second paragraph, and such indication is respectfully requested.

III. Claim Rejections Under 35 U.S.C. § 101

Claims 6, 8-10 and 16-20 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. In response, independent claim 6 is amended to recite a computer implemented method of classifying a combinatorial gate and claim 16 is amended to recite a computer based static timing engine. The Assignee respectfully submits that the independent claims 6 and 16 are directed to a machine, statutory subject matter. Claims 8-10 and 17-20 depend from one of claims 6 and 16. Accordingly, claims 6, 8-10 and 16-20 comply with 35 U.S.C. § 101 and such indication is respectfully requested.

IV. Claim Rejections Under 35 U.S.C. § 102

Claims 1, 3 and 4 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,579,510 to Wang et al. (hereinafter "Wang"). An anticipation rejection requires that each and every claim limitation be disclosed in a single prior art reference.

Initially, the rejection of independent claim 1 is addressed. Claim 1, as amended, includes the limitations "determining that an output signal of the combinatorial gate has been propagated to an evaluate node of a dynamic circuit," "labeling the combinatorial gate as a near dynamic circuit" and "propagating the output signal of the combinatorial gate as a dynamic signal." Support for these claim amendments may be found at least at paragraphs 33-40 of the specification.

Wang discloses determining that an output signal of the combinatorial gate has been propagated to a flip-flop data pin to determine if the output signal is to be treated as a clock signal or a data signal. *See Wang, column 11, lines 24-34.* Wang does not disclose determining that the output signal has been propagated to an evaluate node of a dynamic circuit as required by independent claim 1. Wang further, does not disclose labeling the combinatorial gate as a near dynamic circuit nor propagating the output signal as a dynamic signal. Therefore, Wang is insufficient to anticipate claim 1, as amended. Accordingly, claim 1, as amended, is patentable over Wang, believed to be in form for allowance and such indication is respectfully requested.

The remaining claims 3 and 4 depend from independent claim 1. Accordingly, these dependent claims are themselves patentable over Wang for the above reasons and such indication is respectfully requested. This statement is made without reference to or waiving the independent bases of patentability within each dependent claim.

V. Claim Rejections Under 35 U.S.C. § 103

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Wang. Claims 2, 6 and 8-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wang in view of "Timing-Driven Partitioning and Timing Optimization of Mixed Static-Domino Implementations," M. Zhao and S. Sapatnekar, *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, Vol. 19, No. 11, November 2000, pp. 1322-1336 (hereinafter "Zhao"). Claims 16-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,867,036 to Rajsuman (hereinafter "Rajsuman") in view of Zhao.

A. Rejection of Claim 5

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Wang. Claim 5 depends from independent claim 1 which has been shown to be patentable over Wang. Accordingly, claim 5 is patentable over Wang and such indication is respectfully requested.

B. Rejection of Claims 2, 6 and 8-10

Claims 2, 6 and 8-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wang in view of Zhao. A proper prima facie obviousness rejection requires that the combined references teach or suggest all of the claim limitations. *See MPEP § 2143.*

Claim 2 depends from independent claim 1 which has been shown to be patentable over Wang. Independent claim 6, as amended, includes the limitation "determining that an output of the combinatorial gate is tied to an evaluate node of a dynamic circuit, a clock input of a sequential circuit, or a data input of a sequential circuit." As discussed above, Wang discloses determining that an output signal of the combinatorial gate has been propagated to a flip-flop data pin to determine if the output signal is to be treated as a clock signal or a data signal but does not disclose or suggest determining that the output signal has been propagated to an evaluate node of a dynamic circuit. Accordingly, Wang does not disclose all of the limitations of independent claim 6. Zhao discloses partitioning a circuit into static and domino regions under timing constraints. *See Zhao, Abstract.* Zhao further discloses performing a reverse PERT traversal to determine candidate cut nodes. *See Zhao, page 1329.* However, Zhao does not disclose or suggest determining that the output signal has been propagated to an evaluate node of a dynamic circuit. As such, Wang in view of Zhao does not disclose or suggest all the claim limitations of independent claims 1 and 6. Accordingly, independent claims 1 and 6 are patentable over Wang in view of Zhao, believed to be in form for allowance and such indication is respectfully requested.

The remaining claims 2 and 8-10 depend, either directly or indirectly, from one of independent claims 1 and 6. Accordingly, these dependent claims are themselves patentable over Wang in view of Zhao for the same reasons and such indication is respectfully requested. This statement is made without reference to or waiving the independent bases of patentability within each dependent claim.

C. Rejection of Claims 16-20

Claims 16-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Rajsuman in view of Zhao. Independent claim 16, as amended, includes the limitations "means for determining that an output of the combinatorial gate is tied to a clock input node or an evaluate node of a dynamic circuit" and "means for modeling the output of the combinatorial gate as a dynamic signal when an input to a next element of the circuit is an evaluate node of a dynamic circuit."

It is respectfully submitted that Rajsuman does not teach these limitations. Rajsuman is concerned with how to test dynamic circuits. *See Rajsuman*, column 3, lines 9-40. That is, Rajsuman teaches use of scan chains to clock test vectors into a domino circuit. The vectors are applied as inputs during the evaluation phase and the results (outputs) are checked to detect faults. *See Rajsuman*, column 7, lines 11-23. Rajsuman, however, does

not determine that an output of the combinatorial gate is tied to a clock input node or an evaluate node of a dynamic circuit nor model the output of the combinatorial gate as a dynamic signal when an input to a next element of the circuit is an evaluate node of a dynamic circuit as required by claim 16. Rajsuman only drives domino logic blocks with a clock signal and uses a register to hold input test data constant during test mode to detect faults within the domino logic. *See Rajsuman*, column 6, lines 32-38. Finally, Rajsuman does not perform a reverse traversal function of a circuit containing the combinatorial gate as required by claim 16.

As discussed above, Zhao discloses partitioning a circuit into static and domino regions under timing constraints and performing a reverse PERT traversal to determine candidate cut nodes. However, Zhao does not disclose nor suggest means for determining that an output of the combinatorial gate is tied to a clock input node or an evaluate node of a dynamic circuit or means for modeling the output of the combinatorial gate as a dynamic signal when an input to a next element of the circuit is an evaluate node of a dynamic circuit as required by independent claim 16. Accordingly, independent claim 16 is patentable over Rajsuman in view of Zhao, believed to be in form for allowance, and such indication is respectfully requested.

The remaining rejected claims 17-20 depend from independent claim 16. Accordingly, these dependent claims are themselves patentable over Rajsuman in view of Zhao for the same reasons and such indication is respectfully requested. This statement is made without reference to or waiving the independent bases of patentability within each dependent claim.

VI. Conclusion

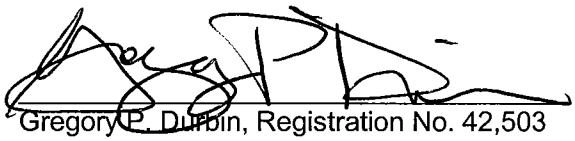
The Applicant thanks the Examiner for his thorough review of the application. The Applicant respectfully submits the present application, as amended, is in condition for allowance and respectfully requests the issuance of a Notice of Allowability as soon as practicable.

This Amendment is submitted contemporaneously with a Request for Continued Examination. Accordingly, please charge Deposit Account No. 04-1415 in the amount of $810.00, for Request for Continued Examination fee. The Applicant believes no further fees or petitions are required. However, if any such petitions or fees are necessary, please consider this a request therefor and authorization to charge Deposit Account No. 04-1415 accordingly.

If the Examiner should require any additional information or amendment, please contact the undersigned attorney.

Dated: Dec. 20, 2007

Respectfully submitted,



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